

9, 82 a plurality of coupling switches electrically connected between respective solar array strings and one of the output power bus and the auxiliary power bus, each coupling switch capable of switching between an on state in which an entire, unshunted output of the respective solar array string is delivered to the respective power bus and an off state in which the entire, unshunted output of the respective solar array string is directed to the other power bus such that the entire, unshunted output of the respective solar array string is directed to only one power bus at a time; and

a controller for controlling said plurality of shunt regulators and said plurality of coupling switches to thereby control the delivery of power to both the output power bus and the auxiliary power bus.

10 14. (Amended) A method of controllably connecting a plurality of solar array strings to one of an output power bus and an auxiliary power bus, the method comprising:

92 selectively directing an output of each solar array string to one of the output power bus, the auxiliary power bus and a shunt path such that the output power bus and the auxiliary power bus are maintained at respective predetermined power levels, wherein said selective direction of the output of each solar array string comprises:

actuating a shunt regulator in instances in which the output of a respective solar array string is to be directed to the shunt path and deactuating the shunt regulator in instances in which the output of the respective solar array string is to be directed to one of the output power bus and the auxiliary power bus; and

switchably connecting the entire, unshunted output of the respective solar array string to one of the output power bus and the auxiliary power bus in instances in which the power is to be delivered to the respective power bus and switchably disconnecting the entire, unshunted output of the respective solar array string from the respective power bus in instances in which the power is to be delivered to the other power bus such that the entire, unshunted output of the respective solar array string is directed to only one power bus at a time.

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